CODE ALARM

PROFESSIONAL SERIES

Security and Remote Start Installation Guide for models:

ca6153

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BEFORE YOU BEGIN

FOR AUTOMATIC TRANSMISSION VEHICLES ONLY.
PROFESSIONAL INSTALLATION
STRONGLY RECOMMENDED

Installation Precautions:

Roll down window to avoid locking keys in vehicle during installation

Avoid mounting components or routing wires near hot surfaces

Avoid mounting components or routing wires near moving parts

Tape or loom wires under hood for protection and appearance

Use grommets when routing wires through metal surfaces

Use a Digital Multi Meter for testing and verifying circuits. DO NOT USE A TEST LIGHT, OR "COMPUTER SAFE PROBE" as these can set off air bags or damage vehicle computers.

Technical Support (800) 421-3209
or go to
http://techservices.codesystems.com

4 Pin Main Harness

4 PIN MAIN	1	WHITE/RED	PARKING LIGHT INPUT
	2	WHITE	PARKING LIGHT OUTPUT
	3	BLACK	GROUND
	4	BROWN	SIREN OUTPUT (+)

6 Pin Start Harness

6 PIN START	1	PURPLE	STARTER OUTPUT - MOTOR SIDE
	2	RED	BATTERY 12V (+)
	3	ORANGE	ACCESSORY 1 (+)
	4	PINK/WHITE	IGNITION 2 (+)
	5	RED/WHITE	BATTERY 12V (+)
	6	PINK	IGNITION 1 (+)

6 Pin Output Harness

6 PIN OUTPUT	1	BROWN/BLACK	HORN OUTPUT (-)
	2	BLUE/BLACK	START STATUS / ACTIVE OUTPUT (-)
	3	VIOLET/BLACK	AUX 1 OUTPUT (-)
	4	RED/WHITE	TRUNK RELEASE OUTPUT (-)
	5	LT GREEN/BLACK	FACTORY DISARM / PULSE BEFORE START (-)
	6	ORANGE	GROUND WHEN ARMED OUTPUT (-)

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8 Pin Input Harness

8 PIN INPUT	1	BLUE/WHITE	INSTANT TRIGGER INPUT (-)
	2	GREEN	DOOR TRIGGER INPUT (-)
	3	PURPLE	DOOR TRIGGER INPUT (+)
	4	WHITE/BLUE	EXTRENAL START INPUT (-)
	5	GRAY	HOOD PIN INPUT (-)
	6	BLACK/WHITE	NEUTRAL SAFETY INPUT (-)
	7	BROWN/RED	BRAKE INPUT (+)
	8	PURPLE/WHITE	TACH INPUT

4 Pin Alternate Output Harness

4 PIN ALTERNATE OUTPUT	1	BLACK/YELLOW	PULSE DURING CRANK (-)
	2	GREEN/WHITE	PULSE AFTER SHUTDOWN (-)
	3	LT BLUE	FACTORY ARM / PULSE AFTER START (-)
	4	LT GREEN/BLACK	FACTORY DISARM / PULSE BEFORE START (-)

3 Pin Lock Output Harness

3 PIN LOCK	1	BLUE	UNLOCK (-)
	2	OPEN	
	3	GREEN	LOCK (-)

4 Pin Main Harness

1	WHITE/RED	PARKING LIGHT INPUT

2	WHITE	PARKING LIGHT OUTPUT

Locate the parking light output wire at the vehicle's light switch.

Verification: This wire registers positive voltage when the parking lights are turned on.

Positive switching Parking Lights:

Connect the WHITE/RED wire to a 15 Amp max fused battery source.

Connect the WHITE wire to the parking light output wire.

Negative switching Parking Lights:

Connect the WHITE/RED wire to a good chassis ground.

Connect the WHITE wire to the parking light output wire.

3	BLACK	GROUND

Connect the BLACK wire to a solid chassis ground point using a ring terminal and self tapping screw (not supplied). Scrape away paint from the grounding point to ensure a good connection. The recommended grounding point is a metal surface in the driver's side kick panel area.

NOTE: Do not ground the BLACK wire with any other vehicle components.

4	BROWN	SIREN OUTPUT (+)

Locate a suitable mounting location in the engine compartment for the siren, away from moving parts.

With the bell of the siren aiming downwards, secure the siren in place using self tapping screws, being careful not do drill into any hoses, wiring or components.

Connect the BLACK siren wire to a chassis ground using a ring terminal and self tapping screw (not supplied).

Route the BROWN siren output wire from the control module through the firewall and connect to the RED wire on the siren.

NOTE: Be sure to loom the siren wires, and seal the grommet.

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6 Pin Start Harness

1	PURPLE	STARTER OUTPUT (+)

Locate the vehicle starter wire.

Verification: This wire registers voltage *only* when the key is turned to the START position. Cut the vehicle's starter wire in half when installing the starter kill relay.

Verification after starter wire is cut:
KEY SIDE of starter wire registers voltage when the key is turned to the START position.
MOTOR SIDE of starter wire registers no voltage.

Connect the PURPLE wire to the vehicle starter wire, use the MOTOR SIDE of the vehicle starter wire when installing the starter kill relay.

2	RED	BATTERY 12V (+)

Locate 1 of the vehicle's constant 12 Volt battery wires at the ignition switch.

Verification: This wire will register (+) voltage in all positions of the ignition switch.

Connect the RED wire to the constant 12 Volt battery wire.

NOTE: Remove all fuses until all connections are made.

3	ORANGE	ACCESSORY 1 (+)

Locate the vehicle's accessory wire at the ignition switch.

Verification: This wire registers voltage when the key is turned to ACC (Accessory) and the ON (or RUN) position. The voltage drops out when the key is turned to the START (or CRANK) position.

Connect the ORANGE wire to the vehicle's accessory wire.

4	PINK/WHITE	IGNITION 2 (+)

Locate the vehicle's 2nd ignition wire at the ignition switch (if equipped).

Verification: This wire registers voltage when the key is turned to the ON (or RUN) position, but not the ACC (Accessory) position. The voltage does not drop out when the key is turned to the START (or CRANK) position.

Connect the PINK/WHITE wire to the vehicle's ignition 2 wire.

Programmable output: IGN, ACC, Start.

5	RED/WHITE	BATTERY 12V (+)

Locate 1 of the vehicle's constant 12 Volt battery wires at the ignition switch.

Verification: This wire will register (+) voltage in all positions of the ignition switch.

Connect the RED/WHITE wire to the constant 12 Volt battery wire.

NOTE: Remove all fuses until all connections are made.

6	PINK	IGNITION 1 (+)

Locate the vehicle's ignition wire at the ignition switch.

Verification: This wire registers voltage when the key is turned to the ON (or RUN) position. The voltage does not drop out when the key is turned to the START (or CRANK) position.

Connect the PINK wire to the vehicle's Ignition wire.

This wire is also used for Ignition 1 Output.

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6 Pin Output Harness

1	BROWN/BLACK	HORN OUTPUT (-)

Locate the vehicle's horn wire.

Verification: This wire will register at positive voltage and register ground when the horn switch is pressed.

Connect the BROWN/BLACK wire to the vehicle's horn wire. This is a low current output, 200mA.

2	BLUE/BLACK	START STATUS / ACTIVE OUTPUT (-)

This wire provides a ground output when the remote start function is activated and remains until 4 seconds after the remote start is shutdown. If this wire will be used for multiple application's a 1 amp diode is required in-line with the stripe facing the control module.

3	VIOLET/BLACK	AUX 1

This wire provides a (-) 200mA output capable of driving relays. For Control of optional accessories (i.e. Power Window/Sunroof, etc.).

To activate refer to the transmitter button configuration chart. Please refer to the selectable options for timing.

4	RED/WHITE	TRUNK RELEASE OUTPUT (-)

Locate the vehicle's trunk release wire at the trunk release switch.

Verification: This wire will register either positive voltage or ground when the trunk release is activated.

This is a low current 200mA output and in configurable in option programming.

5	LT GREEN/BLACK	FACTORY DISARM / PULSE BEFORE START (-)

This wire will supply a (-) 200mA pulse both upon disarming the system and when the remote start feature is activated. Locate the factory perimeter alarm disarm wire from the key cylinder inside the drivers door.

Verification: This wire registers ground if the key is turned to the unlock position in the driver's door cylinder.

Connect the LIGHT GREEN/BLACK wire to the factory alarm disarm wire.

6	ORANGE	GROUND WHEN ARMED OUTPUT (-)

This wire will have a continuous (-) 200mA output when the system is Armed. This wire is typically used for controlling the starter interrupt relay as well as window modules or additional sensors.

This output can be configured in option programming.

8 Pin Input Harness

1	BLUE/WHITE	INSTANT TRIGGER INPUT (-)

This wire is a GROUND input for an external sensor or secondary pin switch.

Verification: This wire when connected will trigger the security system.

2	GREEN	DOOR TRIGGER INPUT (-)

Locate the vehicle's dome light or door pin switch wire.

Verification: This wire will register ground (NEG) when the door is opened and the interior light is on. This wire will register positive voltage when the door is closed and the interior light is off.

Connect the GREEN wire to the vehicle's negative door input wire(s).

NOTE: Certain vehicles may require multiple connections. Refer to vehicle application guide.

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3	PURPLE	DOOR TRIGGER INPUT (+)

Locate the vehicle's dome light or door pin switch wire.

Verification: This wire will register positive voltage (POS) when the door is opened and the interior light is on. This wire will register ground or "0" Volts when the door is closed and the interior light is off.

Connect the PURPLE wire to the vehicle's positive door input wire(s).

NOTE: Certain vehicles may require multiple connections. Refer to vehicle application guide.

4	WHITE/BLUE	EXTERNAL START INPUT (-)

This wire will activate the Remote Start function when a GROUND pulse is applied to it from an external device.

5	GRAY	HOOD PIN INPUT (-)

Install a Hood Pin Switch and connect to the GRAY wire. This connection is required for Remote Start.

Verification: This wire when connected will register ground when the vehicle's hood is opened.

Connect the GRAY wire to the hood pin.

NOTE: Be sure to loom the wire, and seal the grommet.

6	BLACK/WHITE	NEUTRAL SAFETY INPUT (-)

Locate the vehicle's neutral safety circuit.

Verification: This wire registers (-) voltage when the vehicle's gear selector is in park or neutral.

Connect the BLACK/WHITE neutral safety input wire to the neutral safety wire of the vehicle or an optional toggle switch. The remote start feature will not operate unless this input is supplied with a ground source.

7	BROWN/RED	BRAKE INPUT (+)

Locate the vehicle's brake light wire at the brake pedal mounted switch. This connection is required for remote start.

Verification: This wire registers positive voltage when the brake pedal is pressed.

Connect the BROWN/RED wire to the vehicle's brake light wire.

8	PURPLE/WHITE	TACH INPUT

Locate the vehicle's ignition coil or fuel injector in the engine compartment.

Verification: Test using the following procedure:

1. Set voltmeter to AC VOLTS.
2. Attach positive lead of a volt meter to a constant 12 volt source.
3. Attach negative lead of a volt meter to the wire to be tested.
4. Start the engine.
5. Have someone press on the gas pedal slightly as you monitor the meter. If connected to the correct wire, the voltage reading will increase as the engine's RPM increases.

Connect the PURPLE/WHITE wire to the negative side of the vehicle ignition coil or fuel injector.

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4 Pin Alternate Output Harness

1	LT GREEN/BLACK	FACTORY DISARM / PULSE BEFORE START (-)

This wire will supply a (-) 200mA pulse both upon disarming the system and when the remote start feature is activated. Locate the factory perimeter alarm disarm wire from the key cylinder inside the drivers door.

Verification: This wire registers ground if the key is turned to the unlock position in the driver's door cylinder.

This output can be configured in option programming.

2	LT BLUE	FACTORY ARM / PULSE AFTER START (-)

This wire will supply a (-) 200mA pulse both upon arming the system and upon successful completion of the remote start activation sequence and is typically used to re-lock the vehicle's doors upon remote start if necessary.

This output can be configured in option programming.

3	GREEN/WHITE	PULSE AFTER SHUTDOWN (-)

This wire will supply a (-) 200mA pulse after the remote start shuts down. This is typically used to re-lock the vehicle's doors if they unlock upon remote start shutdown. It can also be used to pulse a door pin-switch wire to prevent the vehicle's accessories from remaining on after remote start shutdown.

This output can be configured in option programming.

4	BLACK/YELLOW	PULSE DURING CRANK (-)

Locate the vehicle's second starter (crank) wire at the ignition switch. (if equipped)

Verification: This wire registers voltage only in the start (crank) position of the ignition switch.

This output can be configured in option programming.

3 Pin Lock Output Harness

1	BLUE	UNLOCK (-)

3	GREEN	LOCK (-)

The door lock / unlock outputs are designed to control several different types of systems which may require additional parts. Please review the wire and location chart to see which type of door lock system is in your vehicle. The most common types are shown in the following diagrams.

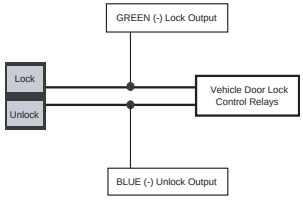
Negative Switching Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will register ground when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE wires shown in the diagram below.

Negative Locks:



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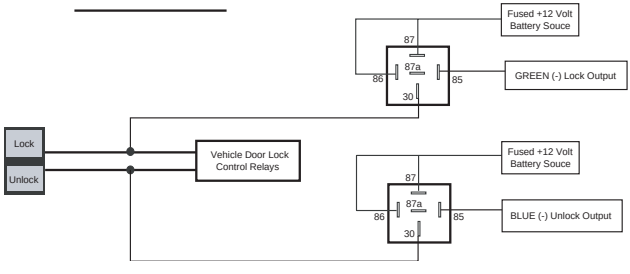
Positive Switching Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will register positive voltage when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE wires shown in the diagram below.

Positive Locks:



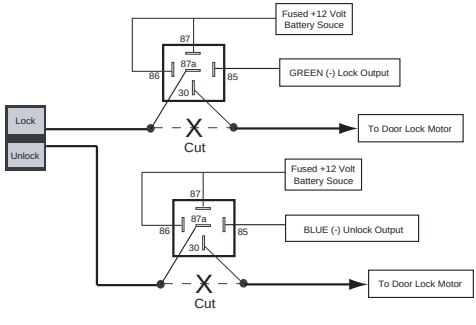
Reverse Polarity Locks (5-Wire Door locks)

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: These wires will rest at ground and register positive voltage when the Lock and Unlock switches are activated.

Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Reverse Polarity Locks:



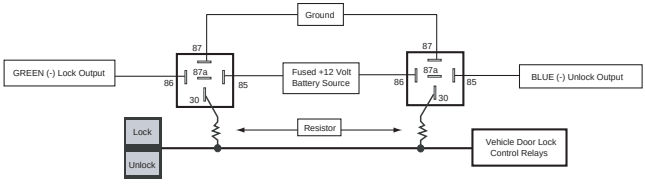
Negative Multiplexed Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: This wire will show variable ground when the switch is activated. Please consult the wire and location chart for specific resistor values for your vehicle.

Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Multiplex Locks:



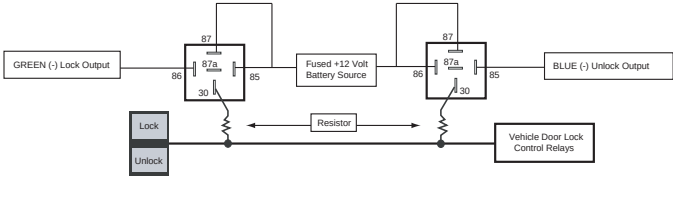
Positive Multiplexed Locks

All Door Lock and Unlock: Locate the lock / unlock wire at the vehicle's lock / unlock switch.

Verification: This wire will show variable positive voltage when the switch is activated. Please consult the wire and location chart for specific resistor values for your vehicle.

Connect the GREEN and BLUE or BLUE/GREEN wires shown in the diagram below using (2) SPDT relays (not supplied).

Multiplex Locks:



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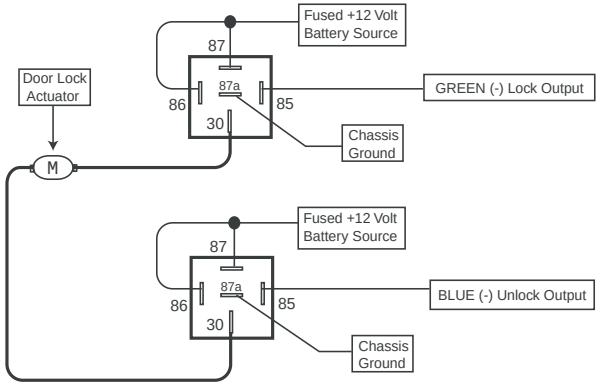
Adding Aftermarket Actuators

After installing aftermarket actuators, (not supplied). Connect the GREEN and BLUE wires shown in the diagram below using (2) SPDT relays (not supplied).



Additional Ports

Antenna / LED / Programming Port

Mount the supplied antenna/receiver to a clear spot on the vehicle's windshield that will not block the driver's vision. A good location is usually high on the windshield near the rear view mirror. Be careful not to mount the antenna/receiver on any metallic window film, as this will effect system range. Route the antenna/receiver cable to the control module and plug into the antenna port.

Data Bus Interface Port

This 4 pin port is used for Flashlogic Door Lock and Transponder Databus Interfaces to communicate with the vehicle's Databus. When using the DBI port to control the Flashlogic Door Lock and Transponder Interface modules the following options may be available. Please refer to the D2D (Data to Data) function list available per vehicle on the tech service web site.

Tach Input	Brake Safety Shut Down
Door Trigger	Trunk/Hatch Open
Door Lock Control	Passlock / Passkey Interface (GM Only)
Dome Light Supervision	Transponder Interface Activation
Factory Alarm Arm / Disarm	Diesel Glow Plug Input

Manual Arm / Disarm Inputs (factory keyless controls system)

Telematic Interface Port

This 4 pin port is used for telematic Interface accessories, such as the CarLink ASCL1, which can control some of the following features.

Door Lock Control	Trunk Release
Sliding Doors	AUX Output
Car Find	Remote Start

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Transmitter Programming - Feature Bank 1

1. Turn the ignition ON.
2. Press and hold the valet/override button.
3. Within 10 seconds the system will chirp (3) three times.
4. Press 1 button of each transmitter you wish to program.
5. The system will respond with 1 chirp for each accepted transmitter.
6. Pressing the override button at anytime during programming will advance to the next bank.

NOTE: The system will exit transmitter programming after 15 seconds of inactivity.

NOTE: This system has 1 button programming which programs all channels of the system.

NOTE: The system will hold up to 4 transmitters in memory, programming a 5th transmitter will erase the oldest transmitter in memory.

NOTE: This system has PTN - Programmed Transmitter Notification. Each time the ignition is turned ON, the LED will flash the number of transmitters programmed to the system.

Transmitter programming for 2 Car Mode *2 way system only:

1. Enter the transmitter into 2 Car Mode. (Refer to transmitter operation in the owners manual for 2 car operation)
2. Follow the steps above for transmitter programming.

NOTE: 2 car mode requires an additional security system installed in a second vehicle.

Manual Feature Programming - Feature Bank 2 - 5

1. Turn the ignition ON.
2. Press and hold the valet/override button.
3. Within 10 seconds the system will chirp (3) three times.
4. Use the valet/override button to advance through each option bank. For feature programming advance to Feature Bank 2, 3, 4 or 5, which is (4) four, (5) five, (6) six and (7) seven chirps.
5. Use the transmitter button to scroll through the selections in each feature bank, the system will chirp to match the feature number.
6. Press the transmitter button to change the desired feature. The LED will flash indicating the changed feature.

Defaulting All Features: Pressing the button anytime while in any of the feature banks will default all features and return you to feature bank 2 - 4 chirps.

NOTE: The system will remain in feature programming mode as long as the ignition is on, there is no time limit. To exit programming turn the IGNITION OFF.

Feature Bank 1 - *3 Chirps*
Transmitter Programming

Refer to transmitter programming.

	Feature Bank 2 - *4 Chirps* **Security Control**	**1 LED Flash**	**2 LED Flash**	**3 LED Flash**	**4 LED Flash**	**5 LED Flash**	**6 LED Flash**
1	Silent Choice	ON	**OFF**				
2	Passive Locks	**Active**	Passive				
3	Passive Arming	**Active**	Passive				
4	Siren / Horn - Arm/Disarm Chirps	**Siren / Horn**	Siren	Horn			
5	Siren Duration	**30 Seconds**	60 Seconds				
6	Security	**ON**	OFF				
7	Anti-Hijack Mode	**OFF**	ON				
8	Orange - Ground w/ Armed Output	**Ground While Armed**	Ground While Disarmed				
9	DBI Port Protocol	**DBI Protocol**	ADS Protocol				
10	Arm/Disarm Chirp / Parking Light Pattern	**Standard:** **2 - Arm** **1 - Disarm**	Inverted: 1 - Arm 2 - Disarm				

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	Feature Bank 3 - *5 Chirps* Output Control	**1 LED Flash**	**2 LED Flash**	**3 LED Flash**	**4 LED Flash**	**5 LED Flash**	**6 LED Flash**
1	Extended Lock Pulse	**1 Second**	3.5 Seconds	1 Second Lock, Double Pulse Unlock	30 Second Lock, Double Pulse Unlock	Double Pulse Lock, 1 Second Unlock	
2	Factory Disarm Lt Green / Black	**Factory Disarm**	2nd Unlock	Factory Disarm / Start Status			
3	Ignition Controlled Locks	**OFF**	Lock and Unlock	Lock Only	Unlock Only		
4	Trunk Output Timing Red / White Output	**1 Second Pulse**	10 Seconds	20 Seconds	Latched until IGN ON	Latched ON until Button Press	
5	Horn Output Timing	**16mS**	10mS	30mS	40mS	50mS	
6	Real Panic	**ON**	OFF				
7	AUX 1 Violet / Black Output	**Push and Hold**	Latched	Latched until IGN ON	Dome Light Output	Defrost Output Single Pulse	Defrost Output Latched 5 Min

	Feature Bank 4 - *6 Chirps* Remote Start Control	**1 LED Flash**	**2 LED Flash**	**3 LED Flash**	**4 LED Flash**	**5 LED Flash**	**6 LED Flash**
1	RF Start Chirp	**ON**	OFF				
2	Run Time	**15 Minutes**	5 Minutes	10 Minutes	20 Minutes	45 Minutes	60 Minutes
3	Running Lights	**Steady**	Flashing				
4	Tach Mode	**Tach**	Tachless (Crank Average / Voltage)	Hybrid (Crank Average / NO Voltage)	DBI Port		
5	Voltage Level	**High**	Low				
6	Crank Time	**1.0 Seconds**	0.8 Seconds	1.5 Seconds	2.0 Seconds	4.0 Seconds	
7	Crank Averaging / Crank Time	**Averaging**	Preset Time				
8	Gas / Diesel	**Gas**	10 Second Delay	15 Second Delay	20 Second Delay	45 Second Delay	
9	Single / Double Press Start	**Double Press**	Single Press				
10	IGN 2 Output	**Ignition 2**	Accessory	Start / Crank			
11	2 or 3 Hour Start	**3 Hour**	2 Hour				
12	Turbo Timer	**OFF**	1 Minute	3 Minute	5 Minute		

	Feature Bank 5 - 7 *Chirps* 4 Pin Alternate Output Control	**1 LED Flash**	**2 LED Flash**	**3 LED Flash**	**4 LED Flash**	**5 LED Flash**	**6 LED Flash**
1	Lt Green / Black Output	**Pulse Before Start / During Unlock**	Ground While Running	Ignition	Accessory	Pulse During Crank	
2	Lt Blue Output	**Pulse After Start / During Lock**	Ground While Running	Ignition	Accessory	Pulse During Crank	
3	Green / White Output	**Pulse After Shutdown**	Ground While Running	Ignition	Accessory	Pulse During Crank	
4	Black / Yellow Output	**Pulse During Crank**	Ground While Running	Ignition	Accessory		

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Tach Programming

The unit will not operate unless tach is programmed or tachless option is turned ON. If an attempt is made to start the vehicle via the remote start without first programming tach, the unit will flash the parking lights 7 times indicating tach has not been learned and stored. If the tach rate is not properly programmed to the specific vehicle, the unit may not realize that the vehicle is running in certain instances and reengage the starter motor.

The Remote Start unit will learn the tach rate of most vehicle's single coil, multiple coil packs, or single injector. To learn tach:

1. Turn the ignition key to the ON position.
2. Press and release the valet/override button 3 times.
3. Immediately turn the ignition key OFF.
4. Press and hold the valet/override button, then start the vehicle using the key.
5. When the unit senses the tach signal, the parking lights will begin to flash.
6. Allow the vehicle to settle to a normal idle speed.
7. Release the valet/program push-button switch. The parking lights will turn on for 2 seconds and 1 long chip will indicate that the learned tach signal is stored and the unit has exited tach learn mode.

NOTE: If the unit fails to learn tach rate due to an improper tach connection or a poor tach source, the parking lights will not flash. To correct this situation, locate and connect the PURPLE/WHITE wire to the proper tach signal, and then repeat the tach learn routine.

Smart Tachless Mode

Smart Tachless Mode is available only if a tach signal has never been learned to the system and when activated will automatically change the Tach Mode feature in option programming to Tachless without the need to enter the feature programming mode.

1. Activate the remote start. The parking lights should begin flashing 7 times indicating no tach signal has been learned.
2. Within the 7 flash time period, press and hold the ↻ button.
3. The system will chirp 1 time indicating the system is now in tachless mode.

Adjusting the Shock Sensor

1. Increase sensitivity by turning the adjustment dial clockwise.
2. Decrease sensitivity by turning the adjustment dial counter clockwise.

Testing the Shock Sensor

Arm the system and wait 6 seconds for the zone to stabilize, then firmly strike the vehicles bumper.

Chirp Delete - User Accessible

System ARM/DISARM chirps can be toggled ON or OFF without entering the programming feature banks.

1. Turn the ignition ON then OFF.
2. Press and release the valet/programming button 3 times. The system will respond with 1 chirp for ON or 2 chirps for OFF.

Dome Light Delay / Theater Dimming

The system can be programed to delay arming after the lock button is pressed (60 second max) for vehicles with a dome light delay or theater dimming feature. Once programed the system will 'learn' the timing of the dome light delay and add 2 seconds before arming.

1. Close all doors with ignition off.
2. Using the transmitter press LOCK, UNLOCK, LOCK ,UNLOCK, LOCK , UNLOCK, LOCK. The LED will light solid to indicate the system has entered DOME DELAY LEARN MODE.
3. Immediately OPEN then CLOSE the door WITHOUT disarming the system. The system will then monitor the door trigger wire. Once the dome light turns off, the system will then add 2 seconds and then exit the learning mode.
4. The LED will begin to flash indicating the system has exited the learning mode and is now armed.

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Feature Bank 2 - Security

1 - Silent Choice: Controls the normal arm/disarm chirps of the security system.

ON - Silent arming/disarming upon first press of lock/unlock, pressing lock/unlock a second time will activate the arm/disarm chirps respectively. The system will only sound the arm/disarm chirps upon a second press of the lock/unlock buttons.

OFF - normal arm/disarm chirps upon the first press of lock/unlock.

2 - Passive Locks: Determines manual or automatic locking of the vehicle's doors.

Active - Requires use of the transmitter to lock the vehicle's doors.

Passive - Automatically locks the vehicle's doors 1 minute after the last door is closed

3 - Passive Arming: Determines manual or automatic locking of the vehicle's doors.

Active - Requires use of the transmitter to arm the security system.

Passive - Automatically arms the security system 1 minute after the last door is closed

4 - Siren / Horn: This feature selects which output(s) will sound the system's arm/disarm chirps. This feature does not effect the triggered state of the security system and during a triggered cycle, both the siren and horn outputs will activate respectively.

5 - Siren Duration: This feature controls the length of time the system will sound when triggered.

6 - Security: Controls security functionality - ON / OFF.

ON - Full security functionality.

OFF - The security system does not trigger. Panic, Remote Start and all other convenience features operate as normal.

7- Anti-Hijack Mode: Controls car jack mode - ON / OFF.

OFF - Standard security system operation.

ON - Enables Car Jack mode functionality as described in the owners manual

8 - Ground While Armed / Orange Output: Controls the output of the orange wire. This wire will either supply a (-) output when armed OR disarmed.

9 - DBI Port Protocol: Determines the protocol type in which the DBI port uses to interface with external modules.

DBI Protocol

ADS Protocol

10 - Arm/Disarm Chirp / Parking Light Pattern: Determines the number of chirps and parking light flashes when the system is armed/disarmed.

Standard - 2 chirps/light flashes with arm, 1 chirp/light flash with disarm.

Inverted - 1 chirp/light flash with arm, 2 chirps/light flashes with disarm.

Feature Bank 3 - Output Control

1 - Extended Lock Pulse: Controls the timing of the BLUE and GREEN lock output wires.

1 Second - Single 1 second lock pulse, single 1 second unlock pulse.

3.5 Seconds - Single 3.5 second lock pulse, single 3.5 second unlock pulse.

1 Second Lock, Double Pulse Unlock - Single 1 second lock pulse, double 1 second unlock pulse.

30 Second Lock, Double Pulse Unlock - Single 30 second lock pulse, double 1 second unlock pulse.

Double Pulse Lock, 1 Second Unlock - Double 1 second lock pulse, single 1 second unlock pulse.

2 - Factory Disarm: Controls the timing of the LT. GREEN/BLACK factory disarm wire on the 6 pin output harness only and does not change the output of the factory disarm wire on the 4 pin alternate output harness.

Factory Disarm - Single 1 second pulse with unlock and remote start activation.

2nd Unlock - Same output as unlock with 2nd press of unlock.

Factory Disarm / Start Status - Single 1 second pulse with unlock and continuous (-) output during the remote start cycle.

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3 - Ignition Controlled Locks: Control of door locks when the ignition is cycled ON or OFF.

OFF - Door locks not activated by ignition.

Lock and Unlock - Doors lock when ignition is turned on and unlock when ignition is turned off.

Lock Only - Doors lock when ignition is turned on.

Unlock Only - Doors unlock when ignition is turned off.

4 - Trunk Output Timing - Red/White Output: Controls the output timing/type of the RED/WHITE output.

1 Second Pulse - 1 second pulse output.

10 Second - Continuous output for 10 seconds.

20 Seconds - Continuous output for 20 seconds.

Latched until IGN ON - Continuous output until the vehicle's ignition is turned ON.

Latched ON until Button Press - Continuous output until the activation button is pressed again.

5 - Horn Output Timing: Control the minimum horn pulse time in milli seconds, some vehicle will require a longer pulse to activate the factory horn.

16mS 10mS 30mS 40mS 50mS

6 - Real Panic: Controls the panic out when triggered from the transmitter.

ON - Randomized horn honks when panic is triggered.

OFF - Standard pattern horn honks when panic is triggered.

7 - AUX 1: Controls the VIOLET/BLACK AUX 1 output activation type and timing.

Push and Hold - Output is continuously active until transmitter button is released.

Latched - Output stays active until button is pressed again.

Latched until IGN ON - Output stays active until the ignition is turned on.

Dome Light Output - Output used for illuminated entry and is not controlled by the AUX 1 function of the transmitter.

Defrost Output Single Pulse - Single 1 second pulse after start

Defrost Output Latched 5 Minutes - 5 minute continuous output after remote start.

Feature Bank 4 - Remote Start Control

1 - RF Start Chirp: Turns remote start activation confirmation chirps ON or OFF.

2 - Run Time: Controls the time in minutes that the vehicle will stay running under control of the remote start until the system times out. The system may also be shut down at any time by use of the transmitter or system shutdowns.

3 - Running Lights: Controls the WHITE parking light output wire during remote start.

Steady - Parking lights constant during the remote start cycle.

Flashing - Parking lights flash at a slow pace during the remote start cycle.

4 - Tach Mode: Determines how the system monitors the engine running during remote start.

Tach - Hard wired directly to the tach wire of the vehicle to monitor AC voltage.

Tachless (Crank Average/Voltage) - Determines crank time by averaging the last 8 times the vehicle was started with the key and then monitors the change in voltage after remote start.

Hybrid (Crank Average / No Voltage) - Determines crank time by averaging the last 8 times the vehicle was started with the key.

DBI Port - Monitors the vehicle's tach rate through an interface module connected to the DBI port.

5 - Voltage Level: The voltage variance for remote start when set to tachless. (see tach mode)

HIGH - The variance in battery voltage from before the remote start is activated to after the engine is running must be greater than 0.5 volts.

LOW - The variance in battery voltage from before the remote start is activated to after the engine is running may be less than 0.5 volts.

6 - Crank Time: Preset output times for the PURPLE starter wire.

7 - Crank Average / Crank Time: The length of time in which the remote start will crank the vehicle's starter.

Crank Average - Determines crank time by averaging the last 8 times the vehicle was started with the key.

Preset Time - Preset starter output time. (see crank time)

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8 - Gas / Diesel: Selects engine type and delay time for the starter output wire during remote start activation.

Gas - Gasoline engine, no delay for the starter output wire.

10 Second Delay - Diesel engine, delays the starter output wire for 10 seconds after the ignition has been powered up by the remote start.

15 Second Delay - Diesel engine, delays the starter output wire for 15 seconds after the ignition has been powered up by the remote start.

20 Second Delay - Diesel engine, delays the starter output wire for 20 seconds after the ignition has been powered up by the remote start.

45 Second Delay - Diesel engine, delays the starter output wire for 45 seconds after the ignition has been powered up by the remote start.

9 - Single / Double Pulse Start: Switches the remote start activation between a single or double press from the transmitter.

10 - IGN 2 Output: Programmable high current output.

Ignition 2 - Output becomes active with the same timing as the ignition output and does not drop out during crank.

Accessory - Output becomes active with the same timing as the accessory output, drops out during crank.

Start / Crank - Output becomes active with the same timing as the starter output wire, during crank only.

11 - 2 or 3 Hour Start: When activated, the remote start will activate and run for the programmed time and shut down every 2 or 3 hours.

12 - Turbo Timer: When activated, the vehicle will run for the programmed time.

OFF 1 Minute 3 Minutes 5 Minutes

Feature Bank 5 - 4 Pin Alternate Output Control

1 - Lt Green/Black Output : Controls the LT GREEN/BLACK output activation type and timing.

Pulse before Start / During Unlock - 1 second pulse when remote start is activated. Also a 1 second pulse when unlock is pressed.

Ground While Running - Continuous output for the entire remote start sequence until after the vehicle shuts down.

Ignition - Output becomes active with the same timing as the ignition output and does not drop out during crank.

Accessory - Output becomes active with the same timing as the accessory output, drops out during crank.

Pulse During Crank - Output becomes active with the same timing as the starter output wire, during crank only.

2 - Lt Blue Output : Controls the LT BLUE output activation type and timing.

Pulse After Start / During Lock - 1 second pulse after the remote start sequence and has confirmed the vehicle is running. Also a 1 second pulse when unlock is pressed.

Ground While Running - Continuous output for the entire remote start sequence until after the vehicle shuts down.

Ignition - Output becomes active with the same timing as the ignition output and does not drop out during crank.

Accessory - Output becomes active with the same timing as the accessory output, drops out during crank.

Pulse During Crank - Output becomes active with the same timing as the starter output wire, during crank only.

3 - Green/White Output : Controls the GREEN/WHITE output activation type and timing.

Pulse After Shutdown - 1 second pulse after the remote start has shutdown.

Ground While Running - Continuous output for the entire remote start sequence until after the vehicle shuts down.

Ignition - Output becomes active with the same timing as the ignition output and does not drop out during crank.

Accessory - Output becomes active with the same timing as the accessory output, drops out during crank.

Pulse During Crank - Output becomes active with the same timing as the starter output wire, during crank only.

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4 - Black/Yellow Output : Controls the BLACK/YELLOW output activation type and timing.

Pulse During Crank - Output becomes active with the same timing as the starter output wire, during crank only.

Ground While Running - Continuous output for the entire remote start sequence until after the vehicle shuts down.

Ignition - Output becomes active with the same timing as the ignition output and does not drop out during crank.

Accessory - Output becomes active with the same timing as the accessory output, drops out during crank.

Transmitter Button Functions

1 Way Transmitter	Lock	Unlock	Car Find / Panic	Start		Operation Method
Lock	X					Press and Release
Unlock		X				Press and Release
2 Step Unlock		X				Press and Release 2 times
Trunk		X				Push and Hold (3 Sec)
Car Finder			X			Press and Release
Panic			X			Push and Hold (3 Sec)
Remote Start				X		Press and Release (1 or 2 times depending on selectable option)
Remote Start Shutdown				X		Push and Hold (3 Sec)
Run Time Extention				X		Press and Release 4 times.
AUX 1	X	X				Push and Hold (3 Sec)
Shock Bypass	X		X			Press and Release Lock then Press Lock + Car Find
Hidden Alarm	X		X			Press and Release Car Fnd then Press Lock
Passive Arming Bypass		X	X			Press and Release
Turbo Timer		X		X		Press Unlock + Start
2 / 3 Hour Start				X		Ignition ON/OFF, Press and Hold Valet Button, Press Start 4 times
Daily Start Timer	X			X		Press Lock + Start

Security Trigger Zones

If the security system has been triggered the LED will flash one of the patterns below indicating the zone.

LED FLASHES	TRIGGER ZONE
2 Flashes	Hood / Trunk Input
3 Flashes	Door Input
4 Flashes	Shock Sensor
5 Flashes	Ignition Input

Remote Start Shutdown Diagnostics

If the remote start shuts down or fails to start, the parking lights will flash one of the patterns below indicating the shutdown input.

To manually enter diagnostics and view the last shutdown, turn the ignition ON and press and release the button.

LED FLASHES	SHUTDOWN ZONE
3 Flashes	Hood Input Brake Input Neutral Safety Input
4 Flashes	Remote Start Valet Mode
5 Flashes	Manual Transmission Mode not set (manual transmission models only)
7 Flashes	Tach not learned / Crank Average not learned

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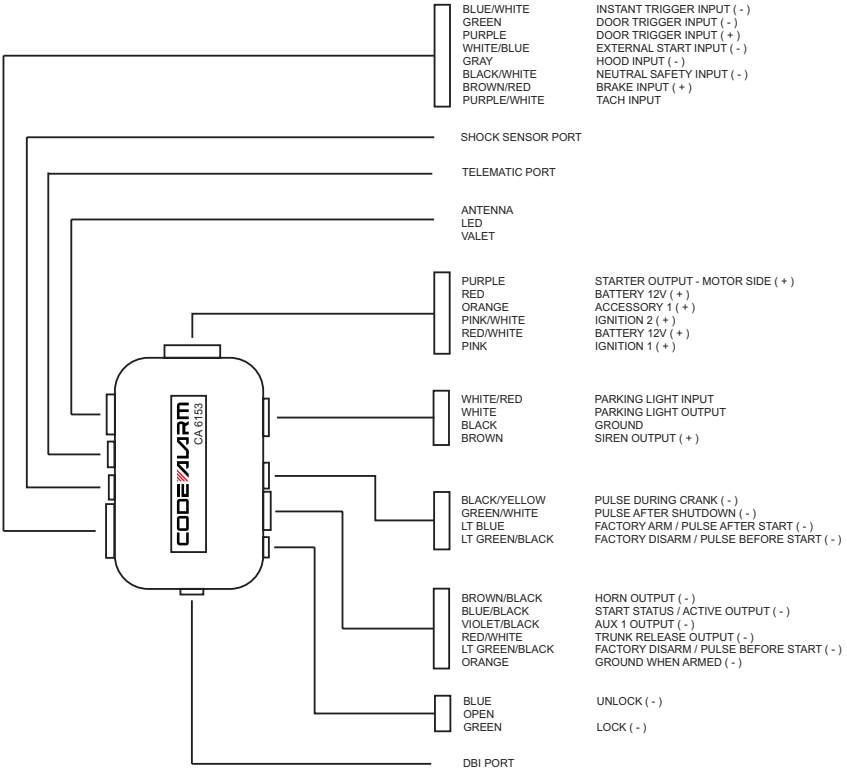

STARTER INTERUPT RELAY

ORANGE — 86 - ARMED OUTPUT (-)
RED — 85 - IGNITION (+)
BLACK — 87A - STARTER OUTPUT - MOTOR SIDE
WHITE / BLACK — 30 - STARTER INPUT - KEY SIDE
OPEN — 87 - OPEN

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WWW.CODE-ALARM.COM

FCC COMPLIANCE

This device complies with Part 15 of the FCC rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including any interference that may cause undesired operation.

Warning!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.